Z94.1-15
(reaffirmed 2020)

Industrial protective headwear — Performance, selection, care, and use

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Preface

This is the sixth edition of CSA Z94.1, *Industrial protective headwear — Performance, selection, care, and use.* It supersedes the previous editions published in 2005, 1992, 1977, and 1966 under the title *Industrial Protective Headwear.* It also supersedes the Preliminary Standard published in 1965 and replaces the protective headwear requirements specified in CSA Z94-1948, *Code for Head and Eye Protection*.

This edition incorporates several changes:

a) A "protected area" has been established through the specification of a test line on the headform used for impact and penetration tests (Clauses 6.3.1, 7.4.6.2, 10.2.5, 10.3.6, and Figure 2).
b) Technical changes have been made to penetration test procedure and apparatus (Clause 7.4.6).
c) The largest size of headform (size "O") is no longer specified for testing purposes (Clause 7.4.7).
d) The UV resistance requirements and pre-conditioning procedure have been removed pending future research to validate the procedure against real-use conditions (exposure to sunlight).
e) Clarification of symbols used on labels has been provided (Annex C).
f) An explanation of the difference between accredited product certification and a manufacturer's self-declaration of compliance has been provided (Annex C).

Wearing protective headwear that meets the requirements of this Standard will reduce the likelihood of injuries to the head. It should be noted, however, that there is a limit to the amount of protection provided by such headwear. It remains the responsibility of the users of this Standard to judge a headwear product's suitability for their particular purpose and to ensure the compatibility of their headwear with associated equipment, e.g., hearing protection devices. Users should consult applicable occupational safety regulations to determine whether they impose safety requirements in addition to or more stringent than those in this Standard.

This Standard was prepared by the Technical Committee on Industrial Protective Headwear, under the jurisdiction of the Strategic Steering Committee on Occupational Health and Safety, and has been formally approved by the Technical Committee.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the Current Standards Activities page at* ***standardsactivities.csa.ca****.*
5) *This Standard is subject to review five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line:*
   a) *Standard designation (number);*

b) *relevant clause, table, and/or figure number;*
c) *wording of the proposed change; and*
d) *rationale for the change.*

Z94.1-15
Industrial protective headwear — Performance, selection, care, and use

1 Scope

1.1
This Standard applies to protective headwear for industrial, construction, mining, utility, and forestry workers. It defines the areas of the head that are to be protected and includes basic performance requirements for dielectric strength, impact attenuation, penetration resistance, passive retention (stability), and shell flammability and liner ignition resistance.

1.2
This Standard includes requirements for and provides guidance on the selection, care, and use of protective headwear.

1.3
The tests specified in this Standard set minimum performance requirements for protective headwear but do not cover other design factors such as comfort, service life, or appearance.

Note: *Compliance with the requirements of this Standard does not imply equality of performance among different types of protective headwear, nor should it be interpreted to mean that a headwear product is capable of affording greater protection than is specified in this Standard.*

1.4
This Standard does not apply to “bump caps”, firefighting helmets, rescue helmets, crash helmets, sports and recreation helmets, or riot control helmets.

1.5
In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications
This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

